### (19) World Intellectual Property Organization

International Bureau



## . I CORRE BRANCON IN CORRES ANNO COME BRANCE BOD I AN AN ESCRETORIA CORRES BARRO ANNO ARRESTATAD CORRES BARRO

(43) International Publication Date 8 July 2004 (08.07.2004)

**PCT** 

# (10) International Publication Number WO 2004/057581 A3

(51) International Patent Classification<sup>7</sup>: 27/32, 27/10

G11B 20/12,

(21) International Application Number:

PCT/IB2003/005722

- (22) International Filing Date: 3 December 2003 (03.12.2003)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02080530.5

20 December 2002 (20.12.2002) B

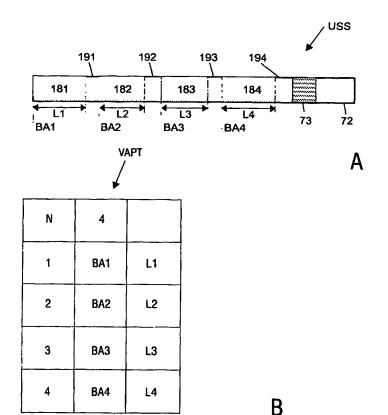
- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BLACQUIERE, Johannes, F., R. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656

AA Eindhoven (NL). SCHOLL, Gerrit, J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

- (74) Agent: DEGUELLE, Wilhelmus, H., G.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,

[Continued on next page]

(54) Title: METHOD FOR DIVIDING USER STORAGE SPACE OF AN OPTICAL DISC, OPTICAL DISC HAVING DIVIDED STORAGE SPACE, AND METHOD AND DEVICE FOR STORING INFORMATION



(57) Abstract: A method is described for writing an optical disc (2) having a user storage space (USS). The method comprising the steps of dividing the storage space of an optical disc (2) into, on the one hand, one or more sections (80; 181, 182, 183, 184) where an application is allowed to write and, on the other hand, one or more sections where it is not allowed to do so. The location and extent of the allowed section(s) is either fixed in format or determined by one or more parameters (BA, L, VAPT) stored on disc. A signal processing system (120) of a video recorder apparatus (100) is designed, before attempting a write operation to a disc (2), to determine the allowed storage area (VASS) for the present disc, and to select free area (72) for writing only within the allowed storage area.



SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

## (88) Date of publication of the international search report: 12 August 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

rui/IB 03/05722

CLASSIFICATION OF SUBJECT MATTER PC 7 G11B20/12 G11B G11B27/32 G11B27/10 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 G11B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with Indication, where appropriate, of the relevant passages Relevant to claim No. WO 00/00982 A (KONINKL PHILIPS ELECTRONICS X 1-3,7, NV ; PHILIPS SVENSKA AB (SE)) 11,13-17 6 January 2000 (2000-01-06) the whole document Α EP 1 267 266 A (SHARP KK) 1,7,13, 18 December 2002 (2002-12-18) 14 the whole document US 5 734 787 A (YONEMITSU JUN ET AL) Α 1,7,13, 31 March 1998 (1998-03-31) column 7, line 1 - line 20 column 16, line 20 - column 18, line 15; table 2 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "A" document defining the general state of the art which is not considered to be of particular relevance \*E\* earlier document but published on or after the international \*X\* document of particular relevance; the claimed Invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed in the art. "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 4 June 2004 15/06/2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Brunet, L

ational Application No
rci/IB 03/05722

ation) DOCIMENTS CONCIDENTS TO BE DELEVIOUR	rui/IB 03/05722
, , , , , , , , , , , , , , , , , , ,	Relevant to claim No.
US 6 198 877 B1 (KAWAMURA MAKOTO ET AL) 6 March 2001 (2001-03-06) column 4, line 26 - column 5, line 8; figure 3	1,7,13, 14
EP 1 065 665 A (TOKYO SHIBAURA ELECTRIC CO) 3 January 2001 (2001-01-03) figure 4	1,7,13, 14
"DVD Read-Only Disk File System Specifications" February 1998 (1998-02), ECMA TECHNICAL REPORT, XX, XX, PAGE(S) A-D,II-IV,1-67, XP002123679 page 65 - page 67	1,7,13, 14
·	
	US 6 198 877 B1 (KAWAMURA MAKOTO ET AL) 6 March 2001 (2001-03-06) column 4, line 26 - column 5, line 8; figure 3  EP 1 065 665 A (TOKYO SHIBAURA ELECTRIC CO) 3 January 2001 (2001-01-03) figure 4  "DVD Read-Only Disk File System Specifications" February 1998 (1998-02), ECMA TECHNICAL REPORT, XX, XX, PAGE(S) A-D, II-IV, 1-67, XP002123679

formation on patent family members

ational Application No rui/IB 03/05722

	<del></del>			PCI/IB	03/05722
Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0000982	Α	06-01-2000	CN CN EP WO JP NO TW US	1467638 A 1114167 B 1040480 A2 0000982 A2 2002519794 T 20000946 A 511076 B 6526475 B1	14-01-2004 09-07-2003 04-10-2000 06-01-2000 02-07-2002 05-04-2000 21-11-2002 25-02-2003
EP 1267266	A	18-12-2002	JP CA EP CN WO US	2001243096 A 2400870 A1 1267266 A1 1426556 T 0163419 A1 2003076764 A1	07-09-2001 30-08-2001 18-12-2002 25-06-2003 30-08-2001 24-04-2003
US 5734787	<b>A</b>	31-03-1998	AU AU BR CN CN CN DE EP PP PL USS USS USS	681259 B2 1824595 A 9505853 A 2160913 A1 1305183 A 1332442 A ,C 1115076 A ,B 1124062 A ,B 69531265 D1 69531265 T2 1336963 A2 0673034 A2 0696799 A1 7311950 A 9524037 A1 311310 A1 179264 B1 24104 A1 RE37327 E1 RE38481 E1 5592450 A 5596565 A 5745505 A	21-08-1997 18-09-1995 21-02-1996 08-09-1995 25-07-2001 23-01-2002 17-01-1996 05-06-1996 21-08-2003 03-06-2004 20-08-2003 20-09-1995 14-02-1996 28-11-1995 08-09-1995 05-02-1996 31-08-2000 10-02-1996 14-08-2001 30-03-2004 07-01-1997 21-01-1997 28-04-1998
US 6198877	B1	06-03-2001	JP JP AT BR CA CN DE DE	3493822 B2 9050675 A 239295 T 9603280 A 2182648 A1 1152168 A 69627766 D1 69627766 T2 0757349 A2	03-02-2004 18-02-1997 15-05-2003 12-05-1998 05-02-1997 18-06-1997 05-06-2003 18-03-2004 05-02-1997
EP 1065665	A	03-01-2001	JP JP JP JP JP JP US	3389086 B2 11238362 A 3389087 B2 11238316 A 3389089 B2 11238318 A 1065665 A1 6549721 B1	24-03-2003 31-08-1999 24-03-2003 31-08-1999 24-03-2003 31-08-1999 03-01-2001 15-04-2003

iformation on patent family members

rational Application No

US 6505964 B1 14-01-2003 US 6556772 B1 29-04-2003 US 6522833 B1 18-02-2003 US 2004081431 A1 29-04-2004 US 2002071659 A1 13-06-2002 US 2002025135 A1 28-02-2002 US 2002025136 A1 28-02-2002 US 2002031329 A1 14-03-2002 WO 9943000 A1 26-08-1999 US 2002015581 A1 07-02-2002	Patent document cited in search report		Publication date		Patent family member(s)	Publication date
	EP 1065665	`A		US US US US US US US	6556772 B1 6522833 B1 2004081431 A1 2002071659 A1 2002025135 A1 2002025136 A1 2002031329 A1 9943000 A1	29-04-2003 18-02-2003 29-04-2004 13-06-2002 28-02-2002 28-02-2002 14-03-2002

Form PCT/ISA/210 (patent family annex) (January 2004)